

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
6 May 2005 (06.05.2005)

PCT

(10) International Publication Number  
**WO 2005/040418 A3**

(51) International Patent Classification<sup>7</sup>: **C12Q 1/68**

(21) International Application Number:  
PCT/EP2004/011269

(22) International Filing Date: 8 October 2004 (08.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
03 023 000.7 10 October 2003 (10.10.2003) EP

(71) Applicant (for all designated States except US):  
**DEUTSCHES KREBSFORSCHUNGSZENTRUM**  
[DE/DE]; Stiftung des öffentlichen Rechts, Im Neuen-  
heimer Feld 280, D-69120 Heidelberg (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **NIEHRS, Christof**  
[DE/DE]; Klingenteichstr. 6b, D-69117 Heidelberg  
(DE). **WU, Wei** [CN/DE]; Spitalstr. 33, D-69214 Eppel-  
heim (DE). **GLINKA, Andrei** [RU/DE]; Im Erlenweg  
27, D-69126 Heidelberg (DE). **KAZANSKAYA, Olga**  
[RU/DE]; Im Erlenweg 22, D-69124 Heidelberg (DE).

(74) Agent: **SCHÜSSLER, Andrea**; Huber & Schüssler, Trud-  
eringer Str. 246, D-81825 München (DE).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(88) Date of publication of the international search report:  
10 November 2005

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: COMPOSITIONS FOR DIAGNOSIS AND THERAPY OF DISEASES ASSOCIATED WITH ABERRANT EXPRES-  
SION OF FUTRINS (R-SPONDINS) AND/OR WNT

(57) Abstract: The present invention relates to a composition useful for the diagnosis of diseases associated with aberrant expression  
of the genes encoding the secreted proteins Futrin 1, 2, 3 and/or 4 (= R-Spondin 2, 3, 1 and 4, respectively), e.g. in connection with  
tumors or diseases of the muscle, kidneys or bones. The present invention also relates to a pharmaceutical composition containing  
a compound which is capable of modifying (a) the expression of the gene encoding Futrin 1, 2, 3 and/or 4 or (b) the activity of the  
Futrin 1, 2, 3 and/or 4 protein.

WO 2005/040418 A3